

NOTICE OF SOME ENTOZOA.

BY PROF. JOSEPH LEIDY.

Distoma crassum Busk. Cobbold: Proc. Linn. Soc., 1860, vol. V, p. 5.

Mr. Busk, an English surgeon, in 1843 announced the occurrence, in the intestine of a Lascar or Hindoo seaman who died in London, of a large species of Fluke for which he suggested the name of *Distoma crassum*. Fourteen specimens obtained ranged from 4 to 6 cm. long by 1.7 to 2 cm. broad. The same parasite has since been reported as occurring in Chinese and in Europeans living in China.¹ In our Proceedings for 1873, p. 364, I gave notice of a specimen from a Chinese boy, which I then supposed to be a larger individual than usual of the more common *D. hepaticum*.

On several occasions I have had the opportunity of examining some large Flukes from the liver of our Deer, *Cervus Virginianus*, and the Domestic Ox, which appear to be identical with the *D. crassum*. The specimens preserved in alcohol, and submitted to me, are as follow:

Six individuals, obtained from the liver of a Doe, in the Adirondack Mts. of New York, by Dr. R. A. F. Penrose. These range from 5 to 6 cm. long by 1.5 to 2.5 cm. broad, and 1.5 to 2.5 mm. thick.

Three individuals from the liver of a Calf, at Hot Springs, Ark., obtained by Dr. G. W. Lawrence. The specimens much contracted and hardened by strong alcohol, measure 3.5 cm. long by 2 to 2.4 cm. broad. An imperfect one is from 3 to 4 mm. thick at the broken border; white for half the thickness dorsally and black ventrally.

Two individuals recently received from Texas, from Dr. M. Francis, Veterinary Surgeon, who writes that the monster Flukes occur there in cattle in limited number, "in the liver-tissue and not in the bile-ducts like the *Distoma hepaticum*. The specimens measure 3.5 and 4 cm. long by 2 and 2.5 cm. broad.

The Flukes from all three hosts accord in character except size, and in many points appear closely related with the *D. hepaticum*. They are elliptical in outline and of greater proportionate breadth than in the latter. The oral pole is conical but not abruptly prolonged as in that species. The caudal pole is broadly rounded and

¹ Cobbold, Parasites, 1879, 21.

entire or medially slightly emarginate. The dorsal surface is convex, smooth and cream-colored; the ventral surface flat or slightly concave, minutely granulate or brownish margined with black, due to the vitelline organs shining through. The oral and ventral acetabula are from 4 to 5 mm. apart; the former oral about 1.5 mm. wide; the latter slightly larger. Genital aperture midway between the acetabula. Penis in some individuals exerted as a short tortuous papilla. The sides of the body, extending from near the head to the tail, occupied by intensely black dendritic vitelline organs. The body is less tenacious than in *D. hepaticum*, is soft and easily broken.

Accompanying the monster Flukes from Texas, were eighteen specimens of the ordinary Liver-Fluke, *Distoma hepaticum*, up to 3.5 cm. long by 9 mm. broad, which Dr. Francis observes are very destructive to Cattle and Sheep in some parts of Texas.

The facts related of the recent occurrence of the large Fluke in the Deer and Ox, in different portions of the United States, would impress one with the idea that the parasite is common with us, but in view of its conspicuous character and its not having been previously noticed such is probably not the case. May there be any relation between the occurrence of the parasite in this country and the influx of a Chinese population? The facts seem curiously coincidental with the first discovery of *Trichina* in man in England and its subsequent discovery in the hog in this country. The Guinea-worm is believed to have been introduced into tropical America with the Negro from Africa.

Sclerostomum armatum Rudolphi, var. *major* Diesing: Syst. Helm. II, 304.

Dr. Edward Landis recently submitted to my examination three worms found coiled in as many thick-walled cysts, in the lung of a Horse. These appear to me to be the larger variety of the *Sclerostomum armatum*, usually found occupying the intestines of the same animal. The specimens, all females, are from 25 to 30 mm. long by 1.5 mm. thick at the fore part. The body is robust, cylindrical, more tapering behind, brownish-red, annularly striate; head dome-like, defined by an annular stria; mouth large, surrounded by a prominent annular lip marked by eight radii; tail short, conical, obtuse.

Ascaris anoura Dujardin: Hist. Nat. des Helminthes, 1845, 221. Leidy: Proc. A. N. S., 1856, 51.

Ascaris attenuata Molin: Prod. faunae helminth. venetae, 1860, 282.

Ascaris rubicunda Schnyder: Monog. T. Nematodon, 1866, 42.,

From the stomach of a Python, *P. molurus*, which recently died in our Zoological Garden, Dr. John L. Hatch obtained a large mass of translucent red and green worms, which were submitted to my examination. These appear to be the *Ascaris anoura* of Dujardin, subsequently described under other names by Molin and Schnyder. The worms for the most part penetrated the recesses of three larger tumefactions of the mucous membrane of the stomach. The greater number of the worms were immature, translucent, of a blood-red color, with a darker intestine shining through, and ranging from 6 to 7 cm. long by about 0.6 mm. thick. The mature females ranged from 10 to 20 cm. long by 1.5 to 2.5 mm. thick. The males ranged from 7 to 16 cm. long by 0.875 to 2 mm. thick.

The body of the worms was most narrowed in advance, from pale red to nearly colorless in the largest and deeper to blood red in the smaller ones; with the intestine shining through of variable pea green to greenish-brown and dark brown in the latter, and with the tortuous ovaries and testes milk white. Cephalic extremity lighter colored, strongly tapering and with distinctly trilobate mouth. Tail very short, conical, the length about equal the breadth at base. The male of more slender proportions, with the caudal end incurved and the tail more pointed, with a row on each side of ten preanal papillæ, one on each side of the anus and two rows of two on each side of the tail. Spicules of the penis long, linear, curved and equal. Pharynx long, cylindrical clavate; rectum very short.

Worms closely agreeing with those of the Python I have observed from two of our common snakes, the Hog-nose Snake, *Heterodon platyrhinus*, and the other, from the accompanying description, supposed to be the Milk-snake, *Ophibolus triangulus*. A portion of the stomach of the latter, preserved with the worms, show them to have the same habits as those of the Python; partially occupying the recesses of a tumefaction of the mucous membrane.